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REMARKS

Claim 48 is amended. No new claims are added. Claims 2-27, 29-48, and 50-58 are pending for consideration. In view of the following remarks, Applicant respectfully requests that this application be allowed and forwarded on to issuance.

Finality Improper

The Examiner has indicated that the Office Action is final. The Applicant respectfully submits that finality is improper and should be withdrawn.

According to MPEP 706.07(a), “second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by Applicant’s amendment of the claims nor based on information submitted in an information disclosure statement. . . .”

In this Office Action, the Office introduces a new ground of rejection for claims 4, 51-53, and 56 by relying on a new reference (Nelson). The Office makes this action final. This new ground of rejection was not necessitated by Applicant’s amendment of the claims. In fact, Applicant made no amendments *whatsoever* to these claims in responding to the previous Office Action (dated April 9, 2003). In addition, this new ground of rejection is not based on information submitted in an IDS. In fact, Applicant had *no* knowledge of the Nelson reference until it received this final Office Action. Thus, under the cited MPEP excerpt, the current Office Action should not be final.

1 This new ground of rejection is one of first impression for the
2 Applicant, and Applicant has not been given the opportunity to address the
3 rejection. Applicant respectfully requests that the finality be withdrawn.

4 Although Applicant maintains that finality is improper, Applicant
5 responds to all rejections in this response, including the new grounds, in the
6 interest of furthering prosecution.

7 8 **The § 102 Rejections**

9 Claims 2-3, 5-9, 11, 13-16, 24-27, 29-30, 54-55 and 57 stand
10 rejected under 35 U.S.C. § 102(a) as being anticipated by PCT Pub.
11 Number WO 99/55102 to Te-eni (hereinafter “Te-eni”).

12 13 **The § 103 Rejections**

14 Claims 17-19, 21-23 and 58 stand rejected under § 103(a) as being
15 unpatentable by Te-eni in view of U.S. Patent No. 6,389,288 to Kuwahara
16 et al (hereinafter “Kuwahara”).

17 Claims 10, 12 and 20 stand rejected under § 103(a) as being
18 unpatentable by Te-eni in view of U.S. Patent No. 5,479,476 to Finke-
19 Anlauff (hereinafter “Finke-Anlauff”).

20 Claims 36, 41 and 42 stand rejected under § 103(a) as being
21 unpatentable by Kovacs et al (“Adaptive Mobile Access to Context-aware
22 Service”, IEEE 1999, pp. 190-201).

23 Claims 31-33, 35, 37-38, 40 and 43-47 stand rejected under § 103(a)
24 as being unpatentable by Kovacs in view of Te-eni.

1 Claims 34 and 39 stand rejected under § 103(a) as being
2 unpatentable by Kovacs in view of Te-eni and further in view of Finke-
3 Anlauff.

4 Claims 48 and 50 stand rejected under § 103(a) as being
5 unpatentable by Kuwahara.

6 Claims 4, 51-53 and 56 stand rejected under § 103(a) as being
7 unpatentable by Te-eni in view of Nelson.

8 9 **Double Patenting Rejection**

10 Claims 2-27, 29-48, and 50-58 stand rejected under the judicially-
11 created doctrine of obviousness-type double patenting as being
12 unpatentable over claims 1-53 of U.S. Patent No. 6,327,535 to Evans et al
13 (hereinafter "Evans") in view of Kovacs.

14 Applicant hereby submits a terminal disclaimer thereby obviating
15 the obviousness-type double patenting rejection.

16 17 **The Te-eni Reference**

18 Because the Office relies so heavily on Te-eni in its rejections of
19 Applicant's claims, Applicant will summarize the key points of Te-eni and
20 discuss why Applicant's claimed subject matter is patentably distinct from
21 anything Te-eni discloses or suggests.

22 Te-eni discloses a system for location and service provisioning based
23 on mobile phone location (Abstract). In the representative embodiment, a
24 *front-end unit* assists a cellular *mobile switching center* in logical
25 determination of mobile phone location (Abstract, also see Fig. 2).

1 As is already apparent from Te-eni's abstract, it is *not* Te-eni's
2 mobile phone which determines its location – instead, it is always a
3 separate entity. In this representative embodiment, it is the combined efforts
4 of the *front-end unit* and the *mobile switching center* (MSC) that
5 determines the mobile phone's location.

6 Te-eni's Summary of the Invention section discloses several ways in
7 which a mobile phone's location can be determined.

- 8
9 • Col. 4, lines 1-3, states that “a *front-end module* is placed
10 within a controlled area and reports to the cellular system
11 which subscribers are *located* in the controlled area [emphasis
12 added].” Therefore, in this embodiment, it is the *front-end*
13 *module* that determines the mobile phone's location. There is
14 *no* disclosure or suggestion to have the *mobile phone itself*
15 determine its own location.
- 16 • Col. 4, lines 16-21, states that “a signaling device, activated
17 in the regulated area, transmits a beacon signal, which is
18 received by the mobile phones located in said regulated area.
19 As the *MSC* receives notification from mobile phones that
20 said beaconing signal is present, relevant subscribers are
21 marked as *located* within the regulated area. . . . [emphasis
22 added].” Therefore, in this embodiment, it is the *MSC* that
23 determines the mobile phone's location. There is *no*
24 disclosure or suggestion to have the *mobile phone itself*
25 determine its own location.

- Col. 4, lines 23-27, states that “the mobile phone receives a signal from a local transmitter and relays said signal to a management system via the cellular switching center. The *management system* identifies the said signal’s properties and extracts the mobile phone’s *location* by processing various parameters related to said signal [emphasis added].” Therefore, in this embodiment, it is the *management system* that determines the mobile phone’s location. There is *no* disclosure or suggestion to have the *mobile phone itself* determine its own location.

Te-*eni*’s Detailed Description provides more details on its methods of determining the location of a mobile phone.

- Col. 9, lines 14-25, states that “the *front-end module* monitors the radio messages transmitted by the mobile unit 22 and determines if the unit is *located* within the regulated area. The front-end 23 communicates with the cellular base station 24 . . . and notifies the MSC 25 of all mobile units currently located within the regulated area. The *MSC* 25 includes a service management unit (SMU) 26. The *SMU* includes software that runs and updates a database of all cellular subscribers current location and profile. . . . The data received from the front end is compared to data from other sources, in order to improve the accuracy of the location coordinates.

1 Thus it is determined whether the user is actually inside the
2 regulated area [emphasis added].” Therefore, in this
3 embodiment, it is the *front-end module* that initially
4 determines the mobile unit’s location and the *MSC* that
5 improves the accuracy of the location coordinates. There is
6 *no* disclosure or suggestion to have the *mobile unit itself*
7 determine its own location.

- 8 • Col. 10, lines 18 through col. 11, line 7, states that “The front
9 end unit 34 incorporates an array of receiving antennas 35
10 comprising a plurality of antennas separated from each other
11 so as to enable accurate intersection of the signals transmitted
12 from the mobile units nearby the regulated area 31. . . . The
13 front end unit 34 converts the measured signal strength,
14 propagation delay, or both from each of the antennas 36-38
15 into digital format and transmits the measured values to a
16 nearby base station 39. In the preferred embodiment, all
17 measurements from various base stations are relayed to the
18 *MSC*, wherein a processor unit 30 *calculates the location* of
19 all mobile units in the vicinity of regulated areas wherein a
20 front end unit is installed [emphasis added].” Therefore, in
21 this embodiment, it is the *MSC* that determines the mobile
22 unit’s location. There is *no* disclosure or suggestion to have
23 the *mobile unit itself* determine its own location. In fact, col.
24 11, lines 7-10, goes on to states that “it should be understood
25 that the location of the processor unit may be *either within*

1 *the front end unit 34 or within the base station 39 as well as*
2 *the MSC 30* [emphasis added].” Therefore, not only is there
3 *no* disclosure or suggestion to have the *mobile unit itself*
4 determine its own location, Te-eni teaches directly *away* from
5 that concept by specifying several alternative locations for the
6 processing unit – *all* of which are entities *separate* from the
7 mobile unit.

- 8 • Col. 15, lines 26 through col. 16, line 2, states that “the
9 presence of the cell-phone in the regulated area may also be
10 established by detecting the cell-phone using a positioning
11 front end as a registry at the entrance, corridor, or gate to the
12 regulated area. The *SMU* will than [sic] extract a database of
13 the *actual position* of the cell-phone users at any given time
14 according to the gates they passed and the positioning front
15 end they have communicated with upon entering and exiting
16 regulated areas [emphasis added].” Therefore, in this
17 embodiment, it is the *SMU* that determines the cell phone’s
18 location. There is *no* disclosure or suggestion to have the *cell*
19 *phone itself* determine its own location.
- 20 • Col. 16, line 30, through col. 17, line 8, states that “a MSC is
21 able to determine that certain cell-phones or Mobile Stations
22 (MS) are located within a predefined area. The method
23 involves transmission of a low power signal. . . . This signal
24 will be received by an MS close to the transmitting device
25 (within the area defined). The MS then transfers information

1 pertaining to this signal to the Base Station (BS) and the
2 MSC. The *MSC Location Software* (MLS) uses a database of
3 the signals received in each covered area, analyses the signals
4 received by the MS, and calculates the MS *location*
5 [emphasis added].” Therefore, in this embodiment, it is the
6 *MSC Location Software* that determines the mobile phone’s
7 location. There is *no* disclosure or suggestion to have the
8 *mobile phone itself* determine its own location.

- 9 • Col. 18, lines 22-25, states that “The *MLS* identifies the
10 channels at which a phantom base station is transmitting
11 among the frequencies listed in the MS message, and
12 determines that the relevant MS is *within the designated*
13 *regulated area* [emphasis added].” Therefore, in this
14 embodiment, it is again the *MLS* that determines the mobile
15 phone’s location. There is *no* disclosure or suggestion to have
16 the *mobile phone itself* determine its own location.
- 17 • Col. 20, lines 3-7, discloses “a mobile phone which is
18 configured to receive a signal or set of signals transmitted
19 from nearby transmission devices. The mobile phone is
20 further configured to relay said signal to the *MLS so as to*
21 *enable the latter* to process the information and derive said
22 mobile phone’s *location* [emphasis added].” Therefore, in this
23 embodiment, it is the *MSC* that determines the mobile
24 phone’s location. There is *no* disclosure or suggestion to have
25 the *mobile phone itself* determine its own location. In fact,

1 Te-eni teaches directly *away* from any capability of the
2 mobile phone to determine its own location because it is
3 *necessary* for the mobile phone to relay the signal to an
4 outside entity (in this case, the MLS) to determine the mobile
5 phone's location.

6
7 **Claims 2-5**

8 **Claim 5** recites a *cellular phone* comprising [emphasis added]:

- 9
- 10 • one or more processors *configured to*:
 - 11 ○ receive information that pertains to a current context of
12 the cellular phone;
 - 13 ○ *determine the current context* based on the
14 information;
 - 15 ○ modify at least one behavior of the cellular phone
16 responsive to the current context; and
 - 17 • an application program interface that is configured to
18 wirelessly receive information that is associated with the
19 phone's context.

20 In making out the rejection of claim 5, the Office argues that Te-eni
21 anticipates this claim. Applicant respectfully but strongly disagrees. Te-eni
22 does not disclose or suggest a *cellular phone* configured to *determine a*
23 *current context*. Te-eni appears to deal with only one type of context –
24 namely, location. As detailed above, not a single embodiment of Te-eni
25 discloses or even remotely suggests a cellular phone configured to
determine its *own location*. Rather, a separate entity must always determine
the cellular phone's location. Specifically, Te-eni discloses that the location
determination is made by either the front end unit, Mobile Switching

1 Center, Service Management Unit, base station, or Mobile Switching
2 Center Location Service. As discussed earlier, Te-eni actually teaches
3 directly *away* from the cellular phone determining its own location.

4 In the Office's "Response to Arguments", the Office directs
5 Applicant's attention to col. 21, lines 1-4 of Te-eni. In that excerpt, Te-eni
6 states that "the mobile handset's operating software can be further
7 configured to perform certain actions upon receiving commands from a
8 local management system through a short-range transport mechanism. Such
9 commands may include speaker mute, MS shut down switch from ring to
10 vibrate mode etc." The Office then states that it is clear that the "
11 'commands' would read on the 'context' claimed, in order to perform
12 certain action upon receiving commands, it is clear that the operating
13 software must be able to determine the context in order to modify the
14 behavior of the mobile unit."

15 Applicant is somewhat unsure of what the Office is actually
16 asserting. The only context that Te-eni deals with is *location*. Certainly, the
17 mobile phone does not need determine its location in order to perform a
18 speaker mute or other such command. In fact, under Te-eni, the mobile
19 phone is *completely incapable* of determining its own location. Perhaps the
20 Office considers the current speaker volume and the current alert mode
21 (e.g., ring versus vibrate) to be a context as Applicant defines that term. If
22 so, the Office's attention is directed to Applicant's specification, page 17,
23 lines 14-20, which is reproduced below:

24 In this document, a specific example of context-dependent
25 computing is given in the form of location dependent computing.

1 It is to be understood that this constitutes but one example of a
2 context in which the various embodiments discussed below can
3 be employed. *Other "contexts" can include, any information*
4 *that can fit into a hierarchical structure* including, without
5 limitation, role/personnel in an organization, device
6 categorizations, current activity, current environment, active
7 devices and the like.

The specification
falls to clearly
or precisely
define the
"context"
term

8 Applicant further discusses the term "context", as it relates to cell
9 phones, in the specification on page 51, lines 1-4, which is reproduced
10 below:

11 Today, however, *cell phones are not aware of their context* and
12 in particular, their location. Using the inventive systems,
13 structures and methods described above, cell phones can be
14 imparted with context awareness and location awareness in a way
15 never before experienced.

16 From these two excerpts alone, it should be clear that Applicant
17 defines the term "context" in such a way that a cell phone's context is
18 distinguished from the behavior of a cell phone. Settings such as speaker
19 volume and alert mode define *behaviors* of a cell phone – not the cell
20 phone's *context*. And, because Te-eni does not disclose or even suggest a
21 cellular phone configured to determine the current *context*, this claim is
22 allowable.

23 **Claims 2-4** depend from claim 5 and, as such, are allowable as
24 depending from an allowable base claim. These claims are also allowable
25 for their own recited features which, in combination with those recited in
claim 5, are neither shown nor suggested by Te-eni either alone or in
combination with any of the references of record.

1 In addition, the Office rejects claim 4 under § 103(a) over the
2 combination of Te-eni and Nelson. In making out the rejection, the Office
3 argues that Te-eni discloses all of the claimed limitations in claim 5 except
4 for a hierarchical traversable tree structure associated with a phone context.
5 Applicant respectfully disagrees that Te-eni discloses all of the features
6 recited in claim 5, as noted above. Thus, to the extent that Te-eni does not
7 anticipate claim 5, the Office has not established a *prima facie* case of
8 obviousness. Moreover, in reliance on Nelson, the Office argues that it
9 discloses a hierarchical traversable tree structure associated with a phone
10 context. The Office further argues that since Nelson teaches the use of
11 hierarchical traversable trees in connection with computer databases, it
12 would be obvious to modify Te-eni for using a hierarchical traversable tree
13 in order to traverse effectively from one mode to another mode for setting
14 the phone to operate according to an instructed mode. Applicant
15 respectfully disagrees.

16 Exploring the context of Nelson in more detail, the hierarchical tree
17 based scheme that Nelson discloses is one that is similar to one described as
18 the Dataman system discussed in section 2.2.1. In Nelson's system, each
19 leaf node of the tree represents a base station and the internal nodes of the
20 tree represent location servers. See, e.g. section 2.2.2, first paragraph.
21 According to the system described in section 2.2.2, each location server
22 maintains information regarding mobile hosts residing in the subtree
23 beneath it and maintains three tuples—a mobile host identifier that provides
24 the address of the host's home location, a forwarding pointer that identifies
25 which location server the host has moved to, and a timestamp that indicates

1 the time that the last forwarding took place. Base stations are said to
2 maintain a similar structure for each host contained within its cell. By
3 using forwarding pointers various updates strategies can be used. Nelson
4 instructs that periodically, the forwarding pointers are collapsed and a
5 single pointer is created. Searching is conducted by progressively moving
6 up the tree until a location server is found which contains a record for the
7 required host.

8 Simply put, the hierarchical tree structure that Nelson discloses is
9 not utilized by mobile devices. Rather, the structure is utilized by either the
10 base station or the location server to find a record for the required host. To
11 this extent, Nelson teaches directly away from the subject matter of claims
12 4 and 5 which collectively recite a cellular phone that determines its own
13 context by traversing at least one node on one or more hierarchical
14 traversable tree structures. Thus, the Office has failed to establish a *prima*
15 *facie* case of obviousness for at least this additional reason.

16 17 **Claims 6-14**

18 **Claim 6** recites a method of operating a cellular phone comprising
19 [emphasis added]:

- 20
21 • wirelessly receiving, with the cellular phone, information that
22 pertains to a context of the cellular phone, the cellular phone
23 being configured to receive said information from different
24 types of context providers that provide different forms of
25 information;
- 26 • responsive to said receiving and *using only the cellular*
27 *phone and its associated on-board componentry,*

1 determining a cellular phone context and modifying at least
2 one behavior associated with the cellular phone.

3 In making out the rejection of this claim, the Office again argues that
4 this claim is anticipated by Te-eni. Applicant strongly disagrees. Te-eni
5 does not disclose or suggest a method of operating a cellular phone
6 comprising determining a cellular phone context *using only the cellular*
7 *phone and its associated on-board componentry*. Te-eni appears to deal
8 with only one type of context – namely, location. As detailed above, not a
9 single embodiment of Te-eni discloses or even remotely suggests a method
10 of determining a cellular phone context *using only the cellular phone and*
11 *its associated on-board componentry*. Rather, a separate entity must
12 always determine Te-eni's cellular phone's location. Specifically, Te-eni
13 discloses that the location determination is made by either the front end
14 unit, Mobile Switching Center, Service Management Unit, base station, or
15 Mobile Switching Center Location Service. As discussed earlier, Te-eni
16 actually teaches directly *away* from a method of determining a cellular
17 phone context *using only the cellular phone and its associated on-board*
18 *componentry*.

19 In the Office's "Response to Arguments", the Office directs
20 Applicant's attention to col. 21, lines 1-4 of Te-eni. In that excerpt, Te-eni
21 states that "the mobile handset's operating software can be further
22 configured to perform certain actions upon receiving commands from a
23 local management system through a short-range transport mechanism. Such
24 commands may include speaker mute, MS shut down switch from ring to
25 vibrate mode etc." The Office then states that it is clear that the

1 “‘commands’ would read on the ‘context’ claimed, in order to perform
2 certain action upon receiving commands, it is clear that the operating
3 software must be able to determine the context in order to modify the
4 behavior of the mobile unit.”

5 Applicant is somewhat unsure of what the Office is actually
6 asserting. The only context that Te-eni deals with is *location*. Certainly, the
7 mobile phone does not need to determine its location in order to perform a
8 speaker mute or other such command. In fact, under Te-eni, there is *no*
9 method of determining the context of a cellular phone *using only the*
10 *cellular phone and its associated on-board componentry*. Perhaps the
11 Office considers the current speaker volume and the current alert mode
12 (e.g., ring versus vibrate) to be a context as Applicant defines that term. If
13 so, the Office’s attention is directed to Applicant’s specification, page 17,
14 lines 14-20, which is reproduced below:

15 In this document, a specific example of context-dependent
16 computing is given in the form of location dependent computing.
17 It is to be understood that this constitutes but one example of a
18 context in which the various embodiments discussed below can
19 be employed. *Other “contexts” can include, any information*
20 *that can fit into a hierarchical structure* including, without
limitation, role/personnel in an organization, device
categorizations, current activity, current environment, active
devices and the like.

21 Applicant further clarifies the term “context”, as it relates to cell
22 phones, in the specification on page 51, lines 1-4, which is reproduced
23 below:

24 Today, however, *cell phones are not aware of their context* and
25 in particular, their location. Using the inventive systems,

1 structures and methods described above, cell phones can be
2 imparted with context awareness and location awareness in a way
3 never before experienced.

4 From these two excerpts alone, it should be clear that Applicant
5 defines the term "context" in such a way that a cell phone's *context* is
6 distinguished from the *behavior* of a cell phone. Settings such as speaker
7 volume and alert mode define *behaviors* of a cell phone – not the cell
8 phone's *context*. And because Te-eni does not disclose or even suggest a
9 method of determining a cellular phone *context using only the cellular*
10 *phone and its associated on-board componentry*, this claim is allowable.

11 **Claims 7-14** depend from claim 6 and, as such, are allowable as
12 depending from an allowable base claim. These claims are also allowable
13 for their own recited features which, in combination with those recited in
14 claim 6, are neither shown nor suggested by Te-eni either singly or in
15 combination with any of the references of record either singly or in
16 combination with one another. In addition, claims 10 and 12 stand rejected
17 under § 103(a) based on Te-eni and Finke-Anlauff. In making out the
18 rejection of these claims, the Office argues that Te-eni discloses all of the
19 limitations in claim 10. Applicant respectfully disagrees. As noted above,
20 Te-eni does not anticipate claim 6 and, in point of fact, teaches directly
21 away from the subject matter of this claim. As such, the Office has failed
22 to establish a *prima facie* case of obviousness with respect to the
23 combination with Finke-Anlauff. Hence, for this additional reason, claims
24 10 and 12 are allowable.
25

1 **Claims 15-16**

2 **Claim 15** recites one or more readable media having readable
3 instructions thereon which, when executed by a cellular phone, *cause the*
4 *cellular phone to* [emphasis added]:

- 5
- 6 • wirelessly receive information from different context source
7 information types that provide different forms of information
8 that pertains to a context of the cellular phone; and
 - 9 • responsive to receiving the information, *determine the*
10 *cellular phone context* and modify at least one behavior
11 associated with the cellular phone.

12 In making out the rejection of claim 15, the Office argues that Te-eni
13 anticipates this claim. Applicant respectfully but strongly disagrees. Te-eni
14 does not disclose or suggest one or more computer-readable media having
15 readable instructions thereon which, when executed by a cellular phone,
16 cause the cellular phone to *determine the cellular phone context*. Te-eni
17 appears to deal with only one type of context – namely, location. As
18 detailed above, not a single embodiment of Te-eni discloses or even
19 remotely suggests instructions which cause the cellular phone to *determine*
20 *the cellular phone location*. Rather, a separate entity must always
21 determine the cellular phone's location. Specifically, Te-eni discloses that
22 the location determination is made by either the front end unit, Mobile
23 Switching Center, Service Management Unit, base station, or Mobile
24 Switching Center Location Service. As discussed earlier, Te-eni actually
25 teaches directly *away* from instructions which cause the cellular phone to
determine the cellular phone location.

1 In the Office's "Response to Arguments", the Office directs
2 Applicant's attention to col. 21, lines 1-4 of Te-eni. In that excerpt, Te-eni
3 states that "the mobile handset's operating software can be further
4 configured to perform certain actions upon receiving commands from a
5 local management system through a short-range transport mechanism. Such
6 commands may include speaker mute, MS shut down switch from ring to
7 vibrate mode etc." The Office then states that it is clear that the
8 "commands" would read on the 'context' claimed, in order to perform
9 certain action upon receiving commands, it is clear that the operating
10 software must be able to determine the context in order to modify the
11 behavior of the mobile unit."

12 Applicant is somewhat unsure of what the Office is actually
13 asserting. The only context that Te-eni deals with is *location*. Certainly, the
14 mobile phone does not need determine its location in order to perform a
15 speaker mute or other such command. In fact, under Te-eni, the mobile
16 phone is *completely incapable* of determining its own location. Perhaps the
17 Office considers the current speaker volume and the current alert mode
18 (e.g., ring versus vibrate) to be a context as Applicant defines that term. If
19 so, the Office's attention is directed to Applicant's specification, page 17,
20 lines 14-20, which is reproduced below:

21 In this document, a specific example of context-dependent
22 computing is given in the form of location dependent computing.
23 It is to be understood that this constitutes but one example of a
24 context in which the various embodiments discussed below can
25 be employed. *Other "contexts" can include, any information
that can fit into a hierarchical structure including, without
limitation, role/personnel in an organization, device*

1 categorizations, current activity, current environment, active
2 devices and the like.

3 Applicant further defines the term “context”, as it relates to cell
4 phones, in the specification on page 51, lines 1-4, which is reproduced
5 below:

6 Today, however, *cell phones are not aware of their context* and
7 in particular, their location. Using the inventive systems,
8 structures and methods described above, cell phones can be
9 imparted with context awareness and location awareness in a way
10 never before experienced.

11 From these two excerpts alone, it should be clear that Applicant
12 defines the term “context” in such a way that a cell phone’s *context* is
13 distinguished from the *behavior* of a cell phone. Settings such as speaker
14 volume and alert mode define *behaviors* of a cell phone – not the cell
15 phone’s *context*. And because Te-eni does not disclose or even suggest
16 instructions which cause the cellular phone to *determine the cellular phone*
17 *context*, this claim is allowable.

18 **Claim 16** depends from claim 15 and, as such, is allowable as
19 depending from an allowable base claim. This claim is also allowable for
20 its own recited features which, in combination with those recited in claim
21 15, are neither shown nor suggested by Te-eni either singly or in
22 combination with any of the references of record.

23 **Claims 17-23**

24 **Claim 17** recites a *cellular phone* comprising [emphasis added]:
25

- 1 • multiple different types of location providers which
2 collectively are configured to receive different forms of
location information that can be *used by the cellular phone to*
3 *ascertain its location*; and
- 4 • one or more processors configured to:
 - 5 ○ receive information associated with a current location
of the cellular phone; and
 - 6 ○ modify at least one behavior of the cellular phone
responsive to the information.

7 In making out the rejection of this claim, the Office argues that the
8 subject matter of this claim is rendered obvious by the combination of Te-
9 eni and Kuwahara.

10 Here again, the Office relies on Te-eni in arguing that it discloses a
11 cellular phone which is capable of determining its location. The Office then
12 states that although Te-eni fails to disclose the step of ascertaining its
13 location from multiple location information, such step is known in the art as
14 disclosed by Kuwahara. Applicant respectfully traverses the rejection and
15 respectfully submits that the Office has failed to make out a *prima facie*
16 case of obviousness.

17 Te-eni does not disclose or suggest a *cellular phone* which
18 *ascertains its location*. As detailed above, not a single embodiment of Te-
19 eni discloses or even remotely suggests a cellular phone configured to
20 determine its *own location*. Rather, a separate entity must always determine
21 the cellular phone's location. Specifically, Te-eni discloses that the location
22 determination is made by either the front end unit, Mobile Switching
23 Center, Service Management Unit, base station, or Mobile Switching
24 Center Location Service. As discussed earlier, Te-eni actually teaches
25 directly *away* from the cellular phone determining its own location.

1 In the Office's "Response to Arguments", the Office directs
2 Applicant's attention to col. 10, line 27 through col. 12, line 1, of Te-eni.

3 This excerpt is reproduced below:

4 By measuring signal strength, propagation delay, or both from
5 each of the receiving antennas 36-38, the distance of the mobile
6 unit 32 from each antenna is calculated. Arcs of possible
7 locations of the mobile unit are then derived from the calculated
8 distances. Well known geographic intersection techniques such
9 as triangulation, arculation, probability density functions, and the
10 like are then used to calculate the location of the mobile unit.

11 This excerpt does not disclose or suggest that it is the *mobile unit*
12 *itself* that determines its own location. Rather, the excerpt describes *how*
13 the location of the mobile unit is determined by an entity other than the
14 mobile unit. In fact, Te-eni, *immediately after this excerpt*, goes on to
15 explain the entity which actually determines the location is either the MSC,
16 front end unit, or base station. A continuation of the excerpt the Office cites
17 is reproduced below [emphasis added]:

18 The front end unit 34 converts the measured signal strength,
19 propagation delay, or both from each of the antennas 36-38 into
20 digital format and transmits the measured values to a nearby base
21 station 39. In the preferred embodiment, all measurements from
22 various base stations are relayed to the *MSC*, wherein a processor
23 unit 30 *calculates the location* of all mobile units in the vicinity
24 of regulated areas wherein a front end unit is installed. It should
25 be understood that the location of the processor unit may be
either within the front end unit 34 or within the base station 39
as well as the MSC 30.

26 Therefore, not only is there *no* disclosure or suggestion to have the
27 *mobile unit itself* determine its own location, Te-eni teaches directly *away*

1 from that concept by specifying several alternative locations for the
2 processing unit – *all* of which are entities *separate* from the mobile unit.

3 Accordingly, for at least this reason, the Office has failed to establish
4 a *prima facie* case of obviousness and this claim is allowable.

5 **Claims 18-23** depend from claim 17 and, as such, are allowable as
6 depending from an allowable base claim. These claims are also allowable
7 for their own recited features which, in combination with those recited in
8 claim 17, are neither shown nor suggested by the references of record either
9 singly or in combination with one another. In addition, given the Office's
10 failure to establish a *prima facie* case of obviousness, the rejection of claim
11 20 over Finke-Anlauff is not seen to add anything of significance.

12
13 **Claims 24-27 and 29-47**

14 **Claim 24** recites a *cellular phone* comprising [emphasis added]:

- 15
- 16 • receiving means configured to wirelessly receive multiple
17 different forms of information that pertains to a current
18 location of a cellular phone and use said multiple different
19 forms of information to *ascertain the current location*; and
 - 20 • means to modify at least one behavior associated with the
21 cellular phone responsive to said information.
- 22

23 In making out the rejection of this claim, the Office argues that the
24 subject matter of this claim is disclosed by Te-eni. Here again, the Office
25 relies on Te-eni in arguing that it discloses a cellular phone with means to
ascertain the current location.

1 Te-eni does not disclose or suggest a *cellular phone* which means to
2 *ascertains the current location*. As detailed above, not a single
3 embodiment of Te-eni discloses or even remotely suggests a cellular phone
4 with means to ascertain *its own current location*. Rather, a separate entity
5 must always determine the cellular phone's location. Specifically, Te-eni
6 discloses that the location determination is made by either the front end
7 unit, Mobile Switching Center, Service Management Unit, base station, or
8 Mobile Switching Center Location Service. As discussed earlier, Te-eni
9 actually teaches directly *away* from the cellular phone determining its own
10 location.

11 In the Office's "Response to Arguments", the Office directs
12 Applicant's attention to col. 10, line 27 through col. 12, line 1, of Te-eni.
13 This excerpt is reproduced below:

14 By measuring signal strength, propagation delay, or both from
15 each of the receiving antennas 36-38, the distance of the mobile
16 unit 32 from each antenna is calculated. Arcs of possible
17 locations of the mobile unit are then derived from the calculated
18 distances. Well known geographic intersection techniques such
19 as triangulation, arculation, probability density functions, and the
20 like are then used to calculate the location of the mobile unit.

21 This excerpt does not disclose or suggest that it is the *mobile unit*
22 *itself* that determines its own location. Rather, the excerpt describes *how*
23 the location of the mobile unit is determined by an entity other than the
24 mobile unit. In fact, Te-eni, *immediately after this excerpt*, goes on to
25 explain the entity which actually determines the location is either the MSC,
front end unit, or base station. A continuation of the excerpt the Office cites
is reproduced below [emphasis added]:

1 The front end unit 34 converts the measured signal strength,
2 propagation delay, or both from each of the antennas 36-38 into
3 digital format and transmits the measured values to a nearby base
4 station 39. In the preferred embodiment, all measurements from
5 various base stations are relayed to the *MSC*, wherein a processor
6 unit 30 *calculates the location* of all mobile units in the vicinity
7 of regulated areas wherein a front end unit is installed. It should
8 be understood that the location of the processor unit may be
9 *either within the front end unit 34 or within the base station 39*
10 *as well as the MSC 30.*

11 Therefore, not only is there *no* disclosure or suggestion of means to
12 allow the *mobile unit itself* determine its own location, Te-eni teaches
13 directly *away* from that concept by specifying several alternative locations
14 for the processing unit – *all* of which are entities *separate* from the mobile
15 unit.

16 Accordingly, for at least this reason, this claim is allowable.

17 **Claims 25-27** depend from claim 24 and, as such, are allowable as
18 depending from an allowable base claim. These claims are also allowable
19 for their own recited features which, in combination with those recited in
20 claim 24, are neither shown nor suggested by Te-eni either singly or in
21 combination with any of the references of record.

22 **Claims 29-30**

23 **Claim 29** recites a method of managing cellular phone behavior
24 comprising [emphasis added]:

- 25 • defining one or more cellular phone behaviors for a given
location; and

- wirelessly transmitting information to cellular phones within that location that permits cellular phones to automatically modify their behavior while in that location, wherein said transmitting information comprises transmitting information that is associated with a *location type* that has attributes that define a cellular phone behavior.

In making out the rejection of this claim, the Office argues that Te-
eni anticipates this claim. Applicant respectfully but strongly disagrees.
Te-eni does not disclose or suggest transmitting information associated
with a location *type* that has attributes that define a cellular phone behavior.
Rather, Te-eni discloses a basic usage policy database with *specific* location
instances in which certain services are allowed or denied.

In the Office's "Response to Arguments", the Office directs
Applicant's attention to col. 13, line 22 through col. 14, line 9, and col. 21,
line 1-4, of Te-eni. These excerpts, excluding Te-eni's Table 1, are
reproduced below [emphasis added]:

Table 1 describes a basic usage policy database for a cellular
system in accordance with one embodiment of the present
invention. Line 1 sets the basic rule – all subscribers are allowed
access to all services at all time. Line 2 denies all cellular
services from all subscribers located within *the* hospital at all
time. Lines 3 and 4 limit all subscribers located at *the* concert
hall (except 245677) to SMS services only during *the* concert
time (22:00-24:00). Line 9 provides additional services to User
518603 when located in *the* company factory area, including
wider bandwidth for network connection and video conferencing,
better quality of service, reduced price, conference call services
etc. Similarly, the availability and price of additional services
may be determined respective to MIN and user profile definitions
versus user current location and regulated areas database.

The mobile handset's operating software can be further
configured to perform certain actions upon receiving commands

1 from a local management system through a short-range transport
2 mechanism. Such commands may include speaker mute, MS shut
down, switch from ring to vibrate mode etc.

3 The Office states that “it is clear that when a user is located within *a*
4 hospital or concert hall, services are denied and a command such as ‘MS
5 shut down’ is transmitted to the mobile, such command message ‘MS shut
6 down’ is the information **associated** with the location type (i.e., hospital or
7 concert) and the ‘MS shut down’ is also the attribute of the location type as
8 claimed.”

9 Applicant respectfully submits that the Office is incorrectly equating
10 Te-eni’s *specific* location *instance* with Applicant’s location *type*.

11 As the excerpt above indicates, Te-eni discloses a usage policy
12 database for *specific* location *instances*. For example, Te-eni does not
13 disclose a location *type* which would include more than one *instance* of a
14 hospital location. Instead, line 2 deals with “*the*” hospital. Likewise, lines
15 3 and 4 deal with “*the*” concert hall. Te-eni’s Fig. 5 confirms this in step
16 54. Step 54 determines whether there is a usage policy defined for a
17 *specific* location. Step 56 allows or denies service according to the
18 “location *specific*” usage policy. According to Te-eni then, there is no
19 single rule which would apply to *more than one* hospital by virtue of the
20 fact that it is a hospital location *type*. Similarly, the rule for a *specific*
21 concert hall would not be applicable to any other environment calling for a
22 similar usage policy or even another concert hall. For example, the Office’s
23 attention is respectfully directed to Te-eni’s Table 1, lines 3 and 5. There,
24 Te-eni sets up separate rules for a *specific* concert hall and a *specific*
25

1 cinema. This is despite the fact that the rules are *identical*. Both location
2 *instances* call for rules denying all services except SMS between the hours
3 of 10 p.m. and midnight. Applicant submits that Te-eni's system is
4 *inefficient, wasteful, and needlessly repetitive*.

5 Applicant, on the other hand, simplifies the association of location
6 and behaviors through the use of multiple *class types* and various attributes
7 that are associated with the class types. Applicant describes this inventive
8 concept on page 58 of the specification. Lines 3-18 of page 58 are
9 reproduced below [emphasis added]:

10 Step 1700 defines one or more class types and step 1702
11 associates attributes with the class types. The class types are
12 intended to describe certain *types of locations* where, for
13 example, certain cell phone behaviors are desired. The attributes
14 that are associated with the class types define the cell phone
15 behavior that is desired for that class *type*. Various examples of
16 this are given in Fig. 16. For example, for a class type 1,
17 attributes are that the ringer is turned off, and so on. Step 1704
18 associates class types with *multiple different locations*. Each
19 location is associated with a class *type*. Accordingly, at these
20 locations, cell phone behavior of location-aware cell phones can
21 be governed by the attributes that are associated with that class
22 *type*. This provides a simple infrastructure for implementing
23 context-aware phones. By utilizing the concept of class types,
24 those individuals who are in charge of overseeing the context-
25 awareness of their particular locations need not be concerned
with anything other than selecting the correct class type for their
location. They can do this by simply reviewing the attributes that
are associated with the different class types and then selecting an
appropriate class *type*.

Te-eni neither discloses nor suggests any such subject matter.
Rather, Te-eni *teaches directly away* from the subject matter of this claim

1 by specifically teaching that a basic usage policy is defined for each
2 location *instance*.

3 Accordingly, for at least this reason, this claim is allowable.

4 **Claim 30** depends from claim 29 and, as such, is allowable as
5 depending from an allowable base claim. This claim is also allowable for
6 its own recited features which, in combination with those recited in claim
7 29, are neither shown nor suggested by Te-eni either singly or in
8 combination with any of the references of record.

9
10 **Claims 31-35**

11 **Claim 31** recites a method of managing cellular phone behavior
12 comprising [emphasis added]:

- 13
- 14 • providing one or more transmitters that are configured to
15 transmit information that permits cellular phones to
16 automatically modify their behavior, at least a portion of the
17 information pertaining to one or more *class types individual*
18 *ones of which* are associated with various attributes that
19 define the behavior of cellular phones;
 - placing the one or more transmitters in a location where a
particular cellular phone behavior is desired; and
 - transmitting information using said one or more transmitters.

20 In making out the rejection of this claim, the Office argues that the
21 subject matter of this claim is suggested by the combination of Kovacs and
22 Te-eni. Specifically, the Office argues that Kovacs discloses one or more
23 class types individual ones of which are associated with various attributes
24
25

1 that define the behavior of cellular phones.

2 Applicant respectfully but strongly disagrees.

3 The Office cites to Kovacs for a mention of silent vibration during a
4 concert. The relevant paragraph in col. 2 of page 190 is provided below:

5 Another trend results from a high market pressure that mobile
6 devices must adapt to the current user situation. For instance,
7 customers require that a mobile telephone's call indication might
8 be issued through different means, e.g., through a silent vibration
9 while being in a (classic) concert or through a direct flashing in a
10 noisy environment (like a rock concert). Other examples can be
11 found through network features like call forwarding, universal
12 personal identification numbers, or voice mailboxes.

13 Applicant respectfully submits that this brief mention of the need for
14 different cell phone behaviors in different environments does not even
15 come close to disclosing "providing one or more transmitters that are
16 configured to transmit information that permits cellular phones to
17 automatically modify their behavior, at least a portion of the information
18 pertaining to one or more class types individual ones of which are
19 associated with various attributes that define the behavior of cellular
20 phones." For instance, Kovacs does not disclose or suggest the notion of
21 *class types*, as that term is defined and used in Applicant's specification.

22 In the Office's "Response to Arguments", the Office argues that "the
23 environments such as hospital or theater would read on 'class types' as
24 claimed." Applicant again respectfully but strongly disagrees. The Office's
25 argument parallels the one the Office made regarding Te-eni in claim 29.

Te-eni discloses a usage policy database for *specific* location
instances. For example, Te-eni does not disclose a location *type* which

1 would include more than one *instance* of a hospital location. Instead, line 2
2 deals with “*the*” hospital. Likewise, lines 3 and 4 deal with “*the*” concert
3 hall. Te-eni’s Fig. 5 confirms this in step 54. Step 54 determines whether
4 there is a usage policy defined for a *specific* location. Step 56 allows or
5 denies service according to the “location *specific*” usage policy. According
6 to Te-eni then, there is no single rule which would apply to *more than one*
7 hospital by virtue of the fact that it is a hospital location *type*. Similarly, the
8 rule for a *specific* concert hall would not be applicable to any other
9 environment calling for a similar usage policy or even another concert hall.
10 For example, the Office’s attention is drawn to Te-eni’s Table 1, lines 3 and
11 5. Te-eni sets up separate rules for a *specific* concert hall and a *specific*
12 cinema. This is despite the fact that the rules are *identical*. Both location
13 *instances* call for rules denying all services except SMS between the hours
14 of 10 p.m. and midnight. Applicant submits that Te-eni’s system is
15 *inefficient, wasteful, and needlessly repetitive*.

16 Applicant, on the other hand, simplifies the association of location
17 and behaviors through the use of multiple *class types* and various attributes
18 that are associated with the class types. Applicant describes this inventive
19 concept on page 58 of the specification. Lines 3-18 of page 58 are
20 reproduced below [emphasis added]:

21 Step 1700 defines one or more class types and step 1702
22 associates attributes with the class types. The class types are
23 intended to describe certain *types of locations* where, for
24 example, certain cell phone behaviors are desired. The attributes
25 that are associated with the class types define the cell phone
behavior that is desired for that class *type*. Various examples of
this are given in Fig. 16. For example, for a class type 1,
attributes are that the ringer is turned off, and so on. Step 1704

1 associates class types with *multiple different locations*. Each
2 location is associated with a class *type*. Accordingly, at these
3 locations, cell phone behavior of location-aware cell phones can
4 be governed by the attributes that are associated with that class
5 *type*. This provides a simple infrastructure for implementing
6 context-aware phones. By utilizing the concept of class types,
7 those individuals who are in charge of overseeing the context-
8 awareness of their particular locations need not be concerned
9 with anything other than selecting the correct class type for their
10 location. They can do this by simply reviewing the attributes that
11 are associated with the different class types and then selecting an
12 appropriate class *type*.

13 Te-eni neither discloses nor suggests any such subject matter.
14 Rather, Te-eni *teaches directly away* from the subject matter of this claim
15 by specifically teaching that a basic usage policy is defined for each
16 location *instance*.

17 In addition, there is nothing in Kovacs that discloses or suggests
18 anything beyond what Te-eni discloses – that is, certain behavior defined
19 for each location *instance*.

20 Therefore, neither the primary or secondary reference cited by the
21 Office in the rejection of this claim disclose or suggest the use of *class*
22 *types* to define the behavior of cellular phones. Accordingly, for at least this
23 reason, the Office has failed to establish a *prima facie* case of obviousness
24 and this claim is allowable.

25 **Claims 32-35** depend from claim 31 and, as such, are allowable as
depending from an allowable base claim. These claims are also allowable
for their own recited features which, in combination with those recited in
claim 31, are neither shown nor suggested in the references of record either
singly or in combination with one another. In addition, given the Office's

1 failure to establish a *prima facie* case of obviousness, the rejection of claim
2 34 over the combination with Finke-Anlauff is not seen to add anything of
3 significance.

4 5 Claims 36-40

6 **Claim 36** recites a method of managing cellular phone behavior
7 comprising [emphasis added]:

- 8
- 9 • defining one or more *class types* each of which can be
10 associated with a location for which a particular cellular
11 phone behavior is desired; and
 - 12 • associating attributes with the one or more class types, the
13 attributes defining cellular phone behavior.
- 14

15 In making out the rejection of this claim, the Office argues that the
16 subject matter of this claim is anticipated or suggested by Kovacs.
17 Specifically, the Office argues that Kovacs discloses one or more class
18 types each of which can be associated with a location for which a particular
19 cellular phone behavior is desired. Applicant respectfully but strongly
20 disagrees.

21 Before discussing how the claimed subject matter is patentably
22 distinct from Kovacs' disclosure, Applicant will discuss the meaning of
23 "class types" as Applicant has defined the term in the specification.
24 Applicant simplifies the association of location and behaviors through the
25 use of multiple *class types* and various attributes that are associated with
the class types. Applicant describes this inventive concept on page 58 of

1 the specification. Lines 3-18 of page 58 are reproduced below [emphasis
2 added]:

3 Step 1700 defines one or more class types and step 1702
4 associates attributes with the class types. The class types are
5 intended to describe certain *types of locations* where, for
6 example, certain cell phone behaviors are desired. The attributes
7 that are associated with the class types define the cell phone
8 behavior that is desired for that class *type*. Various examples of
9 this are given in Fig. 16. For example, for a class type 1,
10 attributes are that the ringer is turned off, and so on. Step 1704
11 associates class types with *multiple different locations*. Each
12 location is associated with a class *type*. Accordingly, at these
13 locations, cell phone behavior of location-aware cell phones can
14 be governed by the attributes that are associated with that class
15 *type*. This provides a simple infrastructure for implementing
16 context-aware phones. By utilizing the concept of class types,
17 those individuals who are in charge of overseeing the context-
18 awareness of their particular locations need not be concerned
19 with anything other than selecting the correct class type for their
20 location. They can do this by simply reviewing the attributes that
21 are associated with the different class types and then selecting an
22 appropriate class *type*.

23
24 In rejecting this claim, the Office cites to Kovacs for a mention of
25 silent vibration during a concert. The relevant paragraph in col. 2 of page
190 is provided below:

19 Another trend results from a high market pressure that mobile
20 devices must adapt to the current user situation. For instance,
21 customers require that a mobile telephone's call indication might
22 be issued through different means, e.g., through a silent vibration
23 while being in a (classic) concert or through a direct flashing in a
24 noisy environment (like a rock concert). Other examples can be
25 found through network features like call forwarding, universal
personal identification numbers, or voice mailboxes.

1 Applicant respectfully submits that this brief mention of the need for
2 different cell phone behaviors in different environments does not disclose
3 “defining one or more *class types* each of which can be associated with a
4 location for which a particular cellular phone behavior is desired.”

5 In the Office’s “Response to Arguments”, the Office argues that “the
6 environments such as hospital or theater would read on ‘class types’ as
7 claimed.” Applicant again respectfully but strongly disagrees. There is
8 nothing in Kovacs that discloses or suggests anything beyond certain
9 behavior defined for each location *instance*. This is quite different from
10 defining one or more class *types* each of which can be associated with a
11 location for which a particular cellular phone behavior is desired.
12 Accordingly, for at least this reason, this claim is allowable.

13 **Claims 37-40** depend from claim 36 and, as such, are allowable as
14 depending from an allowable base claim. These claims are also allowable
15 for their own recited features which, in combination with those recited in
16 claim 36, are neither shown nor suggested by the references of record either
17 singly or in combination with one another. In addition, given the
18 allowability of the base claim, the rejection of claims 37, 38 and 40 over the
19 combination with Te-eni, and of claim 39 over the combination with Te-eni
20 and Finke-Anlauff is not seen to add anything of significance.

21
22 **Claim 41**

23 **Claim 41** recites a method of managing cellular phone behavior
24 comprising [emphasis only]:
25

- 1 • *defining one or more class types* each of which can be
associated with a location for which a particular cellular
2 phone behavior is desired;
- 3 • associating attributes with the one or more class types, the
attributes defining cellular phone behavior; and
- 4 • *associating a class type with a location* for which a particular
cellular phone behavior is desired.

5
6 In making out the rejection of this claim, the Office argues that the
7 subject matter of this claim is anticipated or suggested by Kovacs.
8 Specifically, the Office argues that Kovacs discloses one or more class
9 types each of which can be associated with a location for which a particular
10 cellular phone behavior is desired. Applicant respectfully but strongly
11 disagrees.

12 Before discussing how the claimed subject matter is patentably
13 distinct from Kovacs' disclosure, Applicant will discuss the meaning of
14 "class types" as Applicant has defined the term in the specification.
15 Applicant simplifies the association of location and behaviors through the
16 use of multiple *class types* and various attributes that are associated with
17 the class types. Applicant describes this inventive concept on page 58 of
18 the specification. Lines 3-18 of page 58 are reproduced below [emphasis
19 added]:

20 Step 1700 defines one or more class types and step 1702
21 associates attributes with the class types. The class types are
intended to describe certain *types of locations* where, for
22 example, certain cell phone behaviors are desired. The attributes
that are associated with the class types define the cell phone
23 behavior that is desired for that class *type*. Various examples of
this are given in Fig. 16. For example, for a class type 1,
24 attributes are that the ringer is turned off, and so on. Step 1704
25 associates class types with *multiple different locations*. Each

1 location is associated with a class *type*. Accordingly, at these
2 locations, cell phone behavior of location-aware cell phones can
3 be governed by the attributes that are associated with that class
4 *type*. This provides a simple infrastructure for implementing
5 context-aware phones. By utilizing the concept of class types,
6 those individuals who are in charge of overseeing the context-
7 awareness of their particular locations need not be concerned
8 with anything other than selecting the correct class type for their
9 location. They can do this by simply reviewing the attributes that
10 are associated with the different class types and then selecting an
11 appropriate class *type*.

12
13 In rejecting this claim, the Office cites to Kovacs for a mention of
14 silent vibration during a concert. The relevant paragraph in col. 2 of page
15 190 is provided below:

16
17 Another trend results from a high market pressure that mobile
18 devices must adapt to the current user situation. For instance,
19 customers require that a mobile telephone's call indication might
20 be issued through different means, e.g., through a silent vibration
21 while being in a (classic) concert or through a direct flashing in a
22 noisy environment (like a rock concert). Other examples can be
23 found through network features like call forwarding, universal
24 personal identification numbers, or voice mailboxes.

25
26 Applicant respectfully submits that this brief mention of the need for
27 different cell phone behaviors in different environments does not disclose
28 "defining one or more *class types* each of which can be associated with a
29 location for which a particular cellular phone behavior is desired,
30 associating attributes with the one or more class types, the attributes
31 defining cellular phone behavior, and associating a class type with a
32 location for which a particular cellular phone behavior is desired."

33
34 In the Office's "Response to Arguments", the Office argues that "the
35 environments such as hospital or theater would read on 'class types' as

1 claimed.” Applicant again respectfully but strongly disagrees. There is
2 nothing in Kovacs that discloses or suggests anything beyond certain
3 behavior defined for each location *instance*. This is quite different from
4 defining one or more class *types* each of which can be associated with a
5 location for which a particular cellular phone behavior is desired.
6 Accordingly, for at least this reason, this claim is allowable.

8 Claims 42-47

9 **Claim 42** recites a method of managing cellular phone behavior
10 comprising [emphasis added]:

- 11 • *associating a class type with a location* for which a particular
12 cellular phone behavior is desired, the class type having
13 attributes that define the cellular phone’s behavior; and
- 14 • *wirelessly transmitting information pertaining to the class*
15 *type* for reception by cellular phones in the location, the
16 information being configured to be used by cellular phones to
17 automatically adjust one or more behaviors.

18 In making out the rejection of this claim, the Office argues that the
19 subject matter of this claim is anticipated or suggested by Kovacs.
20 Specifically, the Office argues that Kovacs discloses one or more class
21 types each of which can be associated with a location for which a particular
22 cellular phone behavior is desired. Applicant respectfully but strongly
23 disagrees.

24 Before discussing how the claimed subject matter is patentably
25 distinct from Kovacs’ disclosure, Applicant will discuss the meaning of
“class types” as Applicant has defined the term in the specification.

1 Applicant simplifies the association of location and behaviors through the
2 use of multiple *class types* and various attributes that are associated with
3 the class types. Applicant describes this inventive concept on page 58 of
4 the specification. Lines 3-18 of page 58 are reproduced below [emphasis
5 added]:

6 Step 1700 defines one or more class types and step 1702
7 associates attributes with the class types. The class types are
8 intended to describe certain *types of locations* where, for
9 example, certain cell phone behaviors are desired. The attributes
10 that are associated with the class types define the cell phone
11 behavior that is desired for that class *type*. Various examples of
12 this are given in Fig. 16. For example, for a class type 1,
13 attributes are that the ringer is turned off, and so on. Step 1704
14 associates class types with *multiple different locations*. Each
15 location is associated with a class *type*. Accordingly, at these
16 locations, cell phone behavior of location-aware cell phones can
17 be governed by the attributes that are associated with that class
18 *type*. This provides a simple infrastructure for implementing
19 context-aware phones. By utilizing the concept of class types,
20 those individuals who are in charge of overseeing the context-
21 awareness of their particular locations need not be concerned
22 with anything other than selecting the correct class type for their
23 location. They can do this by simply reviewing the attributes that
24 are associated with the different class types and then selecting an
25 appropriate class *type*.

18 In rejecting this claim, the Office cites to Kovacs for a mention of
19 silent vibration during a concert. The relevant paragraph in col. 2 of page
20 190 is provided below:

22 Another trend results from a high market pressure that mobile
23 devices must adapt to the current user situation. For instance,
24 customers require that a mobile telephone's call indication might
25 be issued through different means, e.g., through a silent vibration
while being in a (classic) concert or through a direct flashing in a
noisy environment (like a rock concert). Other examples can be

1 found through network features like call forwarding, universal
2 personal identification numbers, or voice mailboxes.

3 Applicant respectfully submits that this brief mention of the need
4 for different cell phone behaviors in different environments does not
5 disclose “*associating a class type with a location* for which a particular
6 cellular phone behavior is desired, the class type having attributes that
7 define the cellular phone’s behavior; and *wirelessly transmitting*
8 *information pertaining to the class type* for reception by cellular
9 phones in the location, the information being configured to be used by
10 cellular phones to automatically adjust one or more behaviors.”

11 In the Office’s “Response to Arguments”, the Office argues that “the
12 environments such as hospital or theater would read on ‘class types’ as
13 claimed.” Applicant again respectfully but strongly disagrees. There is
14 nothing in Kovacs that discloses or suggests anything beyond certain
15 behavior defined for each location *instance*. This is quite different from
16 defining one or more class *types* each of which can be associated with a
17 location for which a particular cellular phone behavior is desired.
18 Accordingly, for at least this reason, this claim is allowable.

19 **Claims 43-47** depend from claim 42 and, as such, are allowable as
20 depending from an allowable base claim. These claims are also allowable
21 for their own recited features which, in combination with those recited in
22 claim 42, are neither shown nor suggested by the references of record either
23 singly or in combination with one another. Additionally, given the
24 allowability of the base claim, the rejection of claims 43-47 over the
25 combination with Te-eni is not seen to add anything of significance.

1
2 **Claim 48**

3 As amended, **claim 48** recites a location-aware cell phone that can,
4 using only information that it receives and its on-board componentry,
5 determine its location and automatically adjust one or more of its settings
6 so that it behaves in a manner that has been defined for that location by
7 someone other than a user of the cell phone.

8 In making out the rejection of this claim, the Office argues that the
9 subject matter of this claim is suggested by Kuwahara. However,
10 Kuwahara *requires the user to define* an execution service to be executed
11 in a user-defined location. As such, Kuwahara teaches directly *away* from
12 the claimed subject matter. Accordingly, for at least this reason, this claim
13 is allowable.

14
15 **Claim 50**

16 **Claim 50** recites a method of operating a cellular phone comprising
17 [emphasis added]:

- 18
19
- providing a cellular phone; and
 - determining, with the cellular phone, a present cellular phone
20 location wherein said determining comprises:
 - receiving location information;
 - 21 ○ *accessing one or more hierarchical tree structures*
having nodes that correspond to locations; and
 - 22 ○ using the location information to *traverse at least*
23 *portions of the one or more tree structures* to
ascertain the present location.
- 24
25

1 In making out the rejection of this claim, the Office argues that the
2 subject matter of this claim is suggested by Kuwahara. Specifically, the
3 Office argues that it would have been obvious to use a hierarchical
4 traversable tree structure in order to traverse from the reported location of
5 Kuwahara's zone area to get a corresponding user-defined area vector
6 name. Applicant respectfully but strongly disagrees.

7 In the Office's "Response to Arguments", the Office directs
8 Applicant's attention to Fig. 21 of Kuwahara and argues that Kuwahara's
9 area vector names are hierarchical information of location information. The
10 Office then argues that it would have been obvious to one of ordinary skill
11 in the art to modify Kuwahara to use a hierarchical traversable tree
12 structure in order to traverse effectively from one mode to another mode,
13 for setting the phone to operate according to the instructed mode.

14 Applicant has reviewed Fig. 21 of Kuwahara and respectfully maintains
15 that there is *no* hierarchical structure to Kuwahara's area vector names and
16 reported location information. Hence, there would be no suggestion to use a
17 hierarchical tree structure to represent Kuwahara's area vector names and
18 reported location information.

19 Accordingly, the Office has failed to establish a *prima facie* case of
20 obviousness and this claim is allowable.

21 22 Claims 51-53

23 **Claim 51** recites a *cellular phone* comprising [emphasis added]:

- 24
25
- one or more computer-readable media;

- 1 • one or more hierarchical traversable tree structures resident
2 on the computer-readable media, the tree structures
3 comprising individual nodes each of which being associated
4 with a phone context; and
- 5 • one or more processors *configured to*:
 - 6 ○ receive information that pertains to a current context of
7 the cellular phone;
 - 8 ○ *automatically determine the current context* based on
9 the information by traversing at least one node on one
10 of the trees; and
 - 11 ○ modify at least one behavior of the cellular phone
12 responsive to the current context.

13 In making out the rejection of this claim, the Office argues that the
14 subject matter of this claim is suggested by the combination of Te-eni and
15 Nelson. Here again, the Office relies on Te-eni in arguing that it discloses a
16 cellular phone which is capable of determining its location. As noted above
17 numerous times, this is simply not the case. As such, the Office has not
18 established a *prima facie* case of obviousness.

19 Further, the Office then states that although Te-eni fails to disclose a
20 hierarchical traversable tree structure associated with phone context, such
21 use of a hierarchical traversable tree structure is known in the art as
22 disclosed by Nelson. Applicant traverses the rejection and respectfully
23 submits that the Office has further failed to establish a *prima facie* case of
24 obviousness.

25 Exploring the context of Nelson in more detail, the hierarchical tree
based scheme that Nelson discloses is one that is similar to one described as
the Dataman system discussed in section 2.2.1. In Nelson's system, each
leaf node of the tree represents a base station and the internal nodes of the
tree represent location servers. See, e.g. section 2.2.2, first paragraph.

1 According to the system described in section 2.2.2, each location server
2 maintains information regarding mobile hosts residing in the subtree
3 beneath it and maintains three tuples—a mobile host identifier that provides
4 the address of the host's home location, a forwarding pointer that identifies
5 which location server the host has moved to, and a timestamp that indicates
6 the time that the last forwarding took place. Base stations are said to
7 maintain a similar structure for each host contained within its cell. By
8 using forwarding pointers various updates strategies can be used. Nelson
9 instructs that periodically, the forwarding pointers are collapsed and a
10 single pointer is created. Searching is conducted by progressively moving
11 up the tree until a location server is found which contains a record for the
12 required host.

13 Simply put, the hierarchical tree structure that Nelson discloses is
14 neither utilized by mobile devices nor resident on the mobile devices.
15 Rather, the structure is utilized by either the base station or the location
16 server to find a record for the required host. To this extent, Nelson teaches
17 directly away from the subject matter of claim 51 which recites a cellular
18 phone comprising one or more computer-readable media having one or
19 more hierarchical traversable tree structures that are utilized to determine
20 the current context as recited in this claim. Thus, the Office has failed to
21 establish a *prima facie* case of obviousness for at least this additional
22 reason.

23 Accordingly, for all of the reasons set forth above, this claim is
24 allowable.
25

1 **Claims 52 and 53** depend from claim 51 and, as such, are allowable
2 as depending from an allowable base claim. These claims are also
3 allowable for their own recited features which, in combination with those
4 recited in claim 51, are neither shown nor suggested by the references of
5 record either singly or in combination with one another.

6
7 **Claims 54-57**

8 **Claim 54** recites a *cellular phone* comprising [emphasis added]:

- 9
- 10 • a context service module that is configured to receive
11 different forms of information from multiple different types
12 of context providers; and
 - 13 • one or more processors associated with the context service
14 module and configured to:
 - 15 ○ receive information that pertains to a current context of
16 the cellular phone;
 - 17 ○ *determine the current context* based on the
18 information; and
 - 19 ○ modify at least one behavior of the cellular phone
20 responsive to the current context.

21 In making out the rejection this claim, the Office argues that Te-eni
22 anticipates this claim. Applicant respectfully but strongly disagrees. As
23 noted above, Te-eni simply does not disclose or suggest a *cellular phone*
24 configured to *receive information that pertains to a current context of the*
25 *cellular phone and determine the current context based on the*
information. Accordingly, for at least this reason, this claim is allowable.

Claims 55-57 depend from claim 54 and, as such, are allowable as
depending from an allowable base claim. These claims are also allowable

1 for their own recited features which, in combination with those recited in
2 claim 54, are neither shown nor suggested by the references of record either
3 singly or in combination with one another. Additionally, given the
4 allowability of the base claim, the rejection of claim 56 over the
5 combination with Nelson adds nothing of significance.

6
7 **Claim 58**

8 **Claim 58** recites a *cellular phone* comprising [emphasis added]:

- 9
- 10 • location provider means for receiving different forms of
location information;
 - 11 • *means for ascertaining a location* from the location
information; and
 - 12 • means for modifying at least one behavior associated with the
cellular phone responsive to ascertaining said location.
- 13

14
15 In making out the rejection of this claim, the Office argues that the
16 subject matter of this claim is rendered obvious by the combination of Te-
17 eni and Kuwahara. Here again, the Office relies on Te-eni in arguing that it
18 discloses a cellular phone which is capable of determining its location. As
19 noted above, this is simply not the case.

20 The Office then states that although Te-eni fails to disclose
21 ascertaining its location from different forms of location information, such
22 step is known in the art as disclosed by Kuwahara. Applicant traverses the
23 rejection and respectfully submits that the Office has failed to make a *prima*
24 *facie* case of obviousness.
25

1 Te-eni does not disclose or suggest a *cellular phone* comprising
2 means for *ascertaining a location*. Hence, for at least this reason, the
3 Office has failed to establish a *prima facie* case of obviousness. Given the
4 failure of the Office to establish a *prima facie* case of obviousness, the
5 Office's reliance on Kuwahara adds nothing of significance. Accordingly,
6 for at least this reason, this claim is allowable.

7
8 **Conclusion**

9 All of the claims are in condition for allowance. Accordingly,
10 Applicant requests a Notice of Allowability be issued forthwith. If the
11 Office's next anticipated action is to be anything other than issuance of a
12 Notice of Allowability, Applicant respectfully requests a telephone call for
13 the purpose of scheduling an interview or positioning the application for
14 Appeal.

15
16 Respectfully submitted,

17
18 Dated: 11/19/03

19 By: 

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